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Glide Submarine Driven by multimedia

Technical Field

The invention relates to a new submarine driven by multimedia.

Background Art

According to power system provided, submarine is divided into nuclear-powered submarine, combined diesel oil-electrical powered submarine, and fuel-battery powered submarine. A common feature of these kinds of submarines is that they have to be equipped with energy source and power system which could not be regenerated, does use propeller drive, and can't be driven manually.

Disclosure of the Invention

The object of the invention is to provide a new submarine, which has both underwater and overwater working performances, is mainly powered by means of wind energy resource (reusable and rich in the sea), and is driven by three media, i.e. glide, sail, propeller. That is, it can be controlled and driven by machinery (wind energy generator, combined diesel oil-electrical power, fuel battery and so on) or manually, and it can be driven underwater by glide wing or propeller, and can be driven over water by sail or propeller.

Claims

1. A glide submarine driven by multifunction, which has both underwater and overwater working performances, is mainly powered by means of wind energy resource (reusable and rich in the sea), and is driven by three media, i.e. glide, sail and propeller, comprising a high pressure resistant vessel body, a multi-function sail wing, an elevator, a vertical plane, an internal combustion engine, an electricity generator, a wind power generator, a high energy storage battery, a fuel battery, a foot-operated propeller power system, a submarine elevating controlling system, an inside water tank, two outer elevating water-air bags of changeable stream-linear mode, a sail wing controlling system, and a life maintaining system, a communication system and GPS (global positioning system), and an acoustic susceptance system (sonar system) etc.., characterized in that: an elevator (2), two elevating water bags (3), both supply oxygen hole and drawing point (4), both vessel door and observation window (5), a vertical tail plane (6), a multifunction sail wing (7), a propeller (8), a bolt (9) for fixing sail wing, an elevating control rope of sail wing (16), rudder (19), a flexible fixing rope (18) for the sail wing, both collision-avoidance point and wheel for transmitting and fixing the control rope (17), bolt (15)for fixing the adjustable sail wing, both angle control wheel of the sail wing and accessing point to vessel body for the control rope of the

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sail wing (12), a supporting rod of the sail wing (11), a supporting rod at the top end of the sail wing (10), a supporting rod at the bottom end of the sail wing (14), etc. are provided outside vessel of the submarine; and 20-angle control wheel for the sail wing (20), an elevating control wheel for the sail wing (21), a high pressure oxygen bottle (29), an air filled valve (30), draining valves of water bags (31), a foot paddle of plunger cylinder (32), a foot paddle connecting rod (33), a plunger cylinder (34), an one-way draining valve of water tank (35), an one-way valve (36), a submerging control valve (37), a draining valve for the water tank (38), an air inlet valve(39),a parallel connecting electric pumps operated submarine elevating system (40), an over pressure protecting air-filled valve (41) for the submarine, etc. are provided inside the submarine, with the working process of the submarine being: when submarine is in water surface traveling or anchoring condition, multi functions sail wing (7) is in sail working condition or wind collecting condition, at this time wing power electrical generator (28) is in operation condition, for charging high energy storage battery system (27), when submarine is going to be turned from water surface traveling condition to under water working condition, putting down multi functions sail wing and turning to vessel wing working condition, opening submerging control valve (37), because of in normal condition the pressure of the water within

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elevating water bag (3) outside vessel is always higher than the pressure of water tank (23) inside vessel, therefore, at this time the water within water bag (3) flows into water tank (23) inside vessel, water bag (3) contracts, the volume of draining water of submarine reduces gradually, the draught of submarine increases gradually, when with volume reducing the specific gravity of submarine is larger than the water, submarine is going to sink, at this time closing the valve, pulling operating rod of elevator (2), adjusting the angle of elevator (2), the submarine may move down ahead with a certain angle, when submarine reaches to the boundary of safe depth, operating parallel connecting electrical pump to control elevating system (40) to work, through one-way draining water valve (35) and one-way valve (36), the water within water tank (23) draining into water bag (3), at this time water bag (3) expands, the specific gravity of submarine reduces gradually, when the specific gravity is smaller than the water, the submarine buoys up, at this time adjusting the angle of elevator (2), the submarine may move up ahead with a certain angle, until buoying out of water surface, if submarine is not buoyed out of water surface, after submarine reaches to a certain height, the water within water bag (3) may be drained into water tank again, repeating previous submerging process, draining reciprocally such that, submarine is advanced underwater as letter "Z" shape.



2. The glide submarine driven by multifunction according to claim 1, wherein the working condition of multifunction sail wing (7) is adjustable, under water it works as gliding wing, sail wing is fixed at the top of vessel body parallel to the vessel body by fix bolt of sail wing (9), elastic fix rope (18) of sail wing, adjustable fix bolt (15) of sail wing.
3. The glide submarine driven by multifunction according to claim 1 or 2, wherein when the submarine travels on water surface, the elevating control wheel (21) and the wing angle control wheel (20) are operated to raise the multifunction sail wing (7) through the sail wing control rope (16) and the wing angle control rope (13), and then the wind power generator (28) is installed and the windward angle is adjusted, so that the submarine is driven with the aid of wind power for advancing and the storage battery system (27) of the submarine is charged at the same time.
4. The glide submarine driven by multifunction according to one of claims 1-3, wherein the wind power electrical generator is of multi use type, that is, it can either be provided with fan blade to be used as a wind power electrical generator, or driven by internal combustion engine to generate, and if necessary it can be used as electrical motor.
5. The glide submarine driven by multifunction according to claim 1, wherein a manual driving system (22) and an electrical driving system

are further provided inside submarine, the manual driving system (22) being equipped with manual driving device which can be operated by a plurality of persons independently and simultaneously, and comprising a foot operated wheel disc, a transmission chain, a fly wheel, a positive and negative rotation converting and coupling devices etc., after treading the foot operated wheel disc, through the transmission chain, the flying wheel, the positive and the negative rotation converting and coupling devices, the propeller and, in turn, the rotating propeller (8) are driven, and the thrust generated by rotation of the propeller (8) is applied to the vessel body through the thrust bearing (25 for advancing the submarine forwardly.

6. The glide submarine driven by multifunction according to claim 1, wherein when submarine advances by gliding forwardly under water, or with the aid of sail advancing on water surface, the electrical motor or the internal combustion engine driving device is operated respectively to increase traveling speed of submarine.
7. The glide submarine driven by multifunction according to claim 1, wherein in order to increase traveling speed of submarine, eliminating or providing with but without using elevating water bag (3), during sinking down, sea water is filled directly into water tank (24) inside vessel, during buoying up, the water within water tank (24) inside vessels is drained directly into the sea through treading plunger (34).

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8. The glide submarine driven by multifunction according to any one of claim 1, 4, 5 and 6, wherein the submarine is provided with the wind power generating electricity system, the fuel battery system or the internal combustion engine power system respectively or simultaneously, in traveling condition on water surface or in passed air tube traveling condition, the submarine equipped with the internal combustion engine power system may use the internal combustion engine power system to drive submarine for both advancing and charging storage battery system.
9. The glide submarine driven by multifunction according to claim 1, wherein a high pressure oxygen bottle (29), an air-filled valve (30) and an over pressure protecting air-filled valve (41) of submarine are provided inside the vessel, the air-filled valve (30) and the over pressure protecting air-filled valve (41) connect with corresponding mechanical or electrical testing and protecting devices, of which the function is: when submarine reaches to submerging safe boundary, while the operator does not adopt corresponding provision, the over pressure protecting air-filled valve (41) of submarine is opened by said protecting device, partial water within the high pressure resistant water tank (23) inside vessel is drained out of the vessel, then the submarine is going to buoy up, if this operation step is inefficiency, then air is filled into elevating water bag (3) directly through air filled

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valve, and the submarine is forced to buoy up to protect crew inside vessel for safe.